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ABSTRACT

Seventy-one subjects (22 English monolinguals, 23 Spanish monolinguals, and one bilingual group comprised of 19 Spanish-dominant and 7 English-dominant bilinguals) were assessed by means of the Woodcock-Johnson Psycho-Educational Battery and the Woodcock-Johnson Language Proficiency Battery at the beginning of kindergarten and first grade. These instruments were used to measure oral language, reading aptitude, and reading ability. Results helped to establish patterns of language dominance in the bilinguals and to define different aspects of language proficiency in terms of semantic functioning (i.e., defining words and understanding relationships between words) and communicative competence in everyday activities. It was found that when tested in their weaker language, bilingual children fell behind in basic reading ability and, in the case of early reading in English, group differences were more related to differences in language proficiency and lack of formal English instruction than to differences in cognitive ability and home experience. Results also show that Spanish monolinguals acquire some proficiency in English but at levels below those of other groups. A list of 27 references is included. (Author/MSE)

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YOUNG CHILDREN'S ORAL LANGUAGE PROFICIENCY AND READING ABILITY IN SPANISH AND ENGLISH

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Abstract

Seventy-one subjects (22 English monolinguals, 23 Spanish monolinguals, and one bilingual group comprised of 19 Spanish-dominant and 7 English-dominant bilinguals) were assessed by means of the Woodcock-Johnson Psycho-Educational Battery and the Woodcock-Johnson Language Proficiency Battery at the beginning of kindergarten and first grade. These instruments measure oral language, reading aptitude, and reading ability. Results help establish patterns of language dominance in the bilinguals and define different aspects of language proficiency in terms of semantic functioning (i.e., defining words and understanding relationships between words) as well as communicative competence or the ability to use language in everyday activities. When tested in their weaker language, results showed that bilingual children fell behind in basic reading ability and, in the case of early reading in English, group differences are more related to differences in language proficiency as well as lack of formal English instruction than to differences in cognitive ability and home experience. Results also show that Spanish monolinguals acquire some proficiency in English but at levels below those of the other groups.

Children identified as bilinguals are most often not equally competent in both languages. Carrow (1971), for example, in studying receptivity in bilinguals using the Auditory Test for Language Comprehension, found that most children scored better in one or the other of their two languages while few obtained similar scores in both languages. Similarly, Padilla and Liebman (1975) noted that bilingual children acquiring two languages simultaneously demonstrate a preference in their language output for one language over the other. This appears to be true even though there are reports from parents that the child is proficient in both languages and/or that no language preference is expressed by the parents in speaking to the child. Garcia (1986) suggests that language preference or dominance arises because of differences in the quality and exposure to each language, the social acceptability and constraints placed on each language and the communicative function of each language.

Given the heterogeneity of language ability in child bilinguals, the proper implementation of education programs designed for bilingual students depends on reliable assessment procedures of language proficiency. The success of such procedures should be evaluated by their ability to determine the extent of language strengths and weaknesses in bilingual children and measure discernable progress brought about by instructional factors in language proficiency within a certain period of time.

Closely related to determining levels of language proficiency in bilingual children is the assessment of individual readiness for reading instruction. Reading is characterized as an active and complex cognitive act which involves conceptual and language processes. Consequently, assessment of reading readiness must emphasize linguistic and verbal processing abilities as they affect the bilingual child's ability to learn to read as well as basic reading ability as tapped primarily by word recognition tasks. The measurement of the performance of bilinguals on word recognition tasks is important because success in these tasks depends on the vocabulary and phonological knowledge acquired through oral language experience (Hall, White, & Guthrie, 1986). Thus, lack of proficiency in a language may interfere

with reading or learning to read in that language (Newcomer & Magee, 1977). If language proficiency plays a part, then, it is expected that bilingual children will score higher in reading tasks when tested in the language in which they are more proficient.

With this in mind, the research issue addressed by this study is the acquisition of reading skills in the context of language development. The present study assesses reading ability and language proficiency in bilingual children using subtests from the Woodcock-Johnson Psycho-Educational Battery and the Woodcock-Johnson Language Proficiency Battery at two points in time. The pretest was taken at entrance to kindergarten and the posttest after the completion of kindergarten. Unlike studies of intelligence in bilingual children where the primary concern is to establish language dominance before deciding on an appropriate measure in one language, the study focuses on determining the children's strengths and weaknesses in both of their languages so as to measure change in performance in the Woodcock-Johnson Subtests over time. Thus, emphasis is on measuring progress in language proficiency and reading in both languages. In addition, the English-Spanish bilingual children are compared with English and Spanish monolingual children. This allows for an assessment of language proficiency of bilinguals not only across their two languages, but against monolingual peers from similar environments. Finally, the Spanish monolingual children were administered the Woodcock-Johnson subtests in English on the posttest to examine their acquisition of English. In this way, the subjects of primary interest are those who begin school with a language other than English and children who are bilingual to some degree.

Because progress in language development and reading not only involves instructional factors, but is also dependent on cognitive ability and home background, measures of home literacy, parent education, and nonverbal cognitive ability were also obtained. Without such measures, it would be difficult to ascertain whether progress in these areas was related to instructional factors or to the variation of home backgrounds or native intelligence. Thus, the study also examines the relationship between home literacy, cognitive ability, and primary

language or language dominance in the early phases of reading acquisition in a formal school environment.

Method

Subjects

Ninety children (mean age = 5 years 8 months, 44 males and 46 females) from the kindergarten classes in an urban school participated in the study. The school operates on a year round calendar and is primarily attended by students of low-income Latino households. As part of the school procedure, the oral language proficiency of each entering kindergarten student is assessed by means of the IDEA Oral Language Proficiency Test which consists of English and Spanish forms (Wanda & Phyllis, 1976). On the basis of this test, children are classified as English monolingual (English-only), Spanish monolingual (Spanish-only), and Bilingual. If Bilingual, it is possible to further classify the child as English or Spanish dominant. Based on the language classification of each child, three equal-sized language groups were drawn at random: 30 English-only subjects, 30 Spanish-only subjects and 30 bilinguals of whom eight were English-dominant and 22 were Spanish-dominant. Among the English-only subjects, two children were of Latino background, judging from their surnames.

The language of instruction for each group was the same as the dominant language. Thus, English-only and English-dominant students received classroom instruction in English while Spanish-only and Spanish-dominant students were taught in Spanish. The kindergarten academic curriculum for children receiving instruction in Spanish was equivalent in terms of cognitive concepts to that presented to the children whose instruction was English. Using background references that were appropriate to the particular language group, the curriculum included instruction in oral language and reading readiness development as well as mathematics taught through extensive use of manipulatives.

Instruments

The English and Spanish versions of the Woodcock-Johnson Psycho-Educational Battery (Woodcock & Johnson, 1977; Woodcock, 1982) were used in this study. However, only the subtests comprising the Reading

and the Reading Aptitude clusters were administered. The Reading cluster is made up of three achievement tests (Letter-Word Identification, Word Attack, and Passage Comprehension) which provide a combined measure of sight word vocabulary, phonic/structural analysis, and literal rather than critical or inferential comprehension skills. Thus, it is a measure of basic reading ability emphasizing word recognition skills, with reading comprehension only minimally assessed. The Reading Aptitude cluster, on the other hand, is designed to measure expectation in school reading. It measures the ability to understand and use language with the idea that individuals with well-developed verbal processing skills will typically learn to read relatively well. As such it emphasizes linguistic and verbal processing skills: visual-verbal integration, auditory synthesis, vocabulary comprehension, conceptualization and expression. This cluster consists of four verbal subtests (Visual-Auditory Learning, Blending, Antonyms-Synonyms, and Analogies), and is exclusively a measure of verbal processing.

In addition, the Oral Language cluster from the Woodcock-Johnson Language Proficiency Battery (Woodcock, 1981; 1984) was included in the assessment. This cluster consists of subtests (Picture Vocabulary, Antonyms-Synonyms, and Analogies) drawn from the Psycho-Educational Battery which in combination provide an even balance for evaluating semantic functioning or the semantic aspects of receptive and expressive language skills. The subtests in the Oral Language cluster measure vocabulary comprehension, conceptualization, and expression (i.e., semantic skills--the ability to understand the meaning of words, to conceptualize the relationships of words, and to define words). The Spanish subtests are equivalent to the English subtests across all clusters except in Reading Aptitude where Visual Matching replaces Blending.

Subjects in each of the language groups were also tested on the Raven's Coloured Progressive Matrices Test (Raven, Court, & Raven, 1976). The matrices served as a general measure of nonverbal cognitive ability.

Based on discussions with school personnel, a Parent Literacy Questionnaire intended to tap four different aspects of family life--

(1) language use at home, (2) home literacy, (3) parental aspirations for their children and (4) community involvement--was designed and made available in both English and Spanish.

Home literacy was measured with items which tapped adults' and children's reading habits, availability of reading materials at home and accessibility of reading materials outside the home. The frequency with which parents and children read at home and the frequency with which adults read to children served to assess reading habits. Using information from the Parent Literacy Questionnaire, two background variables were devised, a 7-item Home Literacy Scale and a measure of parental education. The Home Literacy Scale consisted of individual items as well as a cluster of items from the parent questionnaire. Respondents received 0 to 4 points on each of the seven items of the scale. Three items were assigned points based on the total number of books in the home, the total number of children's books in the home and the frequency with which adults read to children. The scoring of other items was conducted according to the amount of writing done in the home, the adults' reading habits, and periodical subscriptions (newspapers and magazines) received in the home. Thus, approximation to the maximum total score of 28 points reflects more reading behaviors and literacy resources in the home. The Cronbach alpha internal-consistency reliability coefficient for the 7-item Home Literacy Scale was .79 suggesting a strong homogeneous measure of home literacy. The second home variable, parental education, was defined as the average of the combined years of schooling of the father and mother for each child.

Procedure

Baseline measures of the children's performance on the Woodcock-Johnson subtests were obtained two months after the beginning of kindergarten while posttest scores were obtained at the beginning of first grade. Because the school was on a year-round schedule, the time interval between test administrations was eight months. Local school personnel administered the required tests; each subject was tested individually. The language used during testing was based on the language classification of the particular subject; thus, English-only and Spanish-only subjects were tested in English and Spanish,

respectively. Bilingual subjects, on the other hand, were tested in both languages with languages counterbalanced across subjects. The testing of bilinguals occurred across two days, one day for each language of testing. In the posttest administration of the Woodcock-Johnson subtests, the Spanish-only subjects were also tested in English.

Midway between the first and second administration of the Woodcock-Johnson subtests, school personnel tested each subject individually on the Progressive Raven Matrices. At this time, only 16 subjects had been dropped from the study.

Mothers escorting their child to the test site for the pretest administration of the Woodcock-Johnson were asked to complete the Parent Literacy Questionnaire in one of two ways: by self-administering the questionnaire or by using the assistance of school personnel who read the questions to the participating adult and recorded the given responses. Questionnaires were provided in English or Spanish depending on the adult's choice of language. Completed questionnaires were received from 89 of the 90 mothers; the parent of only one child did not complete the questionnaire.

Subject attrition. Beginning with 90 children, the sample at the end of the academic year had been reduced to 71 subjects, comprising language cohorts as follows: 23 Spanish-only, 22 English-only, and 26 bilinguals (19 Spanish-dominant and 7 English-dominant). Nineteen subjects were dropped from the study because of extended absenteeism and changes of residence. The analyses reported here include only the subjects for whom the complete set of longitudinal data was available.

Results

The Woodcock-Johnson data were analyzed for the sample comprised of the two bilingual groups, English-dominant (n = 7) and Spanish-dominant (n = 19), in a 2 x 2 (bilingual group x language) multivariate analysis of variance with six dependent variables, three prescores and three postscores. The differences between the postscores and prescores (gain scores) were used to measure the effect of time. Separate MANOVAS for subjects administered the subtests in English, English-only

(n = 22) and bilinguals, and subjects administered the subtests in Spanish, Spanish-only (n = 23) and bilinguals, were also carried out. In addition, t-test comparisons of the English scores of the Spanish-only subjects obtained at the beginning of first grade with the English prescores of English-only, English-dominant, and Spanish-dominant subjects were conducted as well as interlanguage comparisons between the English scores of the Spanish-only subjects and their Spanish prescores in each of the three clusters.

The analysis of all the background variables produced a significant Wilks' Lambda, $F(9, 158) = 3.58$, $p < .001$; the variable means are presented in Table 1. No differences were found on the Raven's matrices among the four groups $F(3, 67) = 1.85$, $p > .05$. Group differences, however, were found for the Home Literacy Scale (HLS), $F(3, 67) = 8.67$, $p < .01$, and parental education, $F(3, 67) = 4.12$, $p < .01$. Follow-up Tukey post hoc comparisons indicated that the English-only subjects obtained higher scores than Spanish-only subjects on the HLS; similarly, parents in the English-only group had more years of schooling than parents of Spanish-only subjects. At the same time, scores for the Spanish-only group on the HLS also differed significantly from those of the English-dominant subjects, but not from the Spanish-dominant subjects at the .05 experimentwise error level. No significant differences between the two bilingual groups were obtained on either the HLS or parents' schooling nor were there differences between the two bilingual groups and the English-only subjects.

Tables 2 and 3 present the pre- and post Woodcock-Johnson cluster means and standard deviations for Spanish (Table 2) and English (Table 3) testings for all language groups.

English-dominant bilingual subjects. In comparing the test scores in Spanish and English, no significant differences were found except in the Reading prescore where the mean score in Spanish was higher than the mean obtained in English (411.7 and 399.9, respectively), $F(1, 24) = 16.4$, $p < .001$. However, the mean difference between the postscore and prescore (mean gain score) in English Reading was almost twice as great as the mean gain score in Spanish Reading (18.4 and 9.7, respectively), $F(1, 24) = 5.04$, $p < .05$. While these subjects made

Table 1

Means and Standard Deviations of Background Variables

Group[a]		Raven's Matrices	Home literacy Scale	Parents' Schooling
English-only	M	15.5	14.4[b]	9.9[b]
	SD	4.0	6.4	3.4
Spanish-only		14.2	7.0[c]	6.8
		3.0	3.8	2.4
English-dominant		14.4	13.7	8.9
		2.6	5.3	2.0
Spanish-dominant		16.7	10.9	8.6
		4.1	4.8	3.5

[a] n = 22 for English-only, n = 23 for Spanish-only, n = 7 for English-dominant, n = 19 for Spanish-dominant.
[b] Significantly different ($p < .05$) from Spanish-only group.
[c] Significantly different ($p < .05$) from English-dominant group.

Table 2

Means and Standard Deviations of Spanish Woodcock-Johnson

Group[a]		Prescores: Oral Language	Prescores: Reading	Prescores: Reading Aptitude
Spanish-only	M	446.8	417.0	444.7
	SD	9.6	4.9	7.4
Spanish-dominant		443.7	416.1	445.2
		9.4	5.1	7.1
English-dominant		442.9	411.7[b]	449.4
		13.5	3.8	6.5
		Postscores		
Spanish-only		462.0	428.2	461.5
		10.6	12.1	11.5
Spanish-dominant		463.1	429.6	464.5
		10.5	7.9	10.3
English-dominant		447.3[b]	421.4[c]	463.1
		18.7	11.4	4.8

[a] n = 23 for Spanish-only, n = 19 for Spanish-dominant, n = 7 for English-dominant.
[b] Significantly different ($p < .05$) from Spanish-only and Spanish-dominant.
[c] Significantly different ($p < .05$) from Spanish-dominant.

Table 3

Means and Standard Deviations of English Woodcock-Johnson

Group[a]		Prescores: Oral Language	Prescores: Reading	Prescores: Reading Aptitude
English-only	M	436.5	396.1	440.3
	SD	17.3	16.7	15.4
English-dominant		440.1	399.9	446.6
		7.7	5.4	9.5
Spanish-dominant		422.3[b]	394.6	438.1[c]
		13.7	8.9	8.0
		Postscores		
English-only		455.5	414.5	464.1
		17.8	15.9	31.4
English-dominant		457.0	418.3	464.7
		4.1	22.7	5.2
Spanish-dominant		436.8[b]	402.3[b]	453.7[c]
		11.4	12.5	10.1
Spanish-only		412.8[d]	385.6[e]	436.8
		16.3	17.1	24.4

[a] n = 22 for English-only, n = 7 for English-dominant, n = 19 for Spanish-dominant, n = 23 for Spanish-only.
[b] Significantly different ($p < .05$) from English-only and English-dominant.
[c] Significantly different ($p < .05$) from English-dominant.
[d] Significantly different ($p < .05$) from prescores of English-only and English-dominant.
[e] Significantly different ($p < .05$) from prescores of English-only and bilingual groups.

significant gains in all of their English scores, when tested in Spanish, significant improvement was evident only in their Reading and Reading Aptitude scores. Their performance in Spanish Oral Language did not show a significant increase over time, $F(1, 24) = 5.04$, $p > .05$. Consequently, nonparallel gains in oral language were made in the two languages with mean gain scores of 16.9 in English and 4.4 in Spanish, $F(1, 24) = 5.70$, $p < .05$.

Spanish-dominant bilingual subjects. These subjects demonstrated parallel gains in both languages in each of the three clusters measured. Significant mean gain scores were obtained from all the English clusters, as well as from the three Spanish clusters. In addition, Spanish-dominant subjects obtained higher scores on the Woodcock-Johnson when they were tested in Spanish, in both the pretests and posttests.

English testing. In the English version of the Woodcock-Johnson, there were no statistically significant differences between the two bilingual groups in mean gain scores. There were also no differences in mean gain scores when the two groups were compared with the English-only subjects. Group differences did emerge when the six dependent measures were examined. In particular, English-dominant subjects obtained higher scores than Spanish-dominant subjects on all the cluster postscores, and on the prescores of Oral Language, $F(1, 24) = 10.52$, $p < .01$, and Reading Aptitude, $F(1, 24) = 5.18$, $p < .05$. The two groups did not differ significantly on the pretest measure of Reading, $F(1, 24) = 2.10$, $p > .05$. At the same time, the Spanish-dominant subjects scored significantly lower than the English-only subjects on the Oral Language prescore, $F(1, 45) = 9.29$, $p < .01$, and postscore, $F(1, 45) = 17.66$, $p < .01$, as well as, on the Reading postscore, $F(1, 45) = 6.10$, $p < .05$. No significant differences between the English-dominant and English-only subjects were found.

Spanish testing. Comparison of the two bilingual groups with the Spanish-only subjects showed no statistically significant group differences in mean gain scores. Spanish-dominant subjects, however, demonstrated greater improvement over time in Spanish Oral Language than English-dominant subjects, $F(1, 24) = 12.46$, $p < .01$. In Reading

and Reading Aptitude, no significant differences in mean gain scores between the two bilingual groups were found, $F(1, 24) = 1.0$ and 3.41, respectively, $p > .05$. In the case of individual cluster scores, the Reading prescore and the Oral Language postscore of the English-dominant subjects were significantly lower than those of the Spanish-only and Spanish-dominant subjects. The English-dominant subjects also scored significantly lower than the Spanish-dominant subjects in the Reading postscore, $F(1, 24) = 4.32$, $p < .05$. Both the pre- and postscores of the Spanish-dominant bilingual subjects were not different from their monolingual Spanish-only comparison group.

Spanish-only subjects. The English scores of the Spanish monolingual subjects from the post testing were compared with their Spanish prescores, as well as with the English prescores of the English-only, English-dominant, and Spanish-dominant subjects. T-test comparisons of the performance on each of the two languages showed that Spanish-only subjects obtained significantly higher scores in Spanish than English in Oral Language, $t(22) = -10.29$, $p < .001$, and Reading, $t(22) = -10.34$, $p < .001$. In Reading Aptitude, no significant difference was found between the two languages, $t(22) = -1.57$, $p > .05$. The remaining comparisons demonstrated that in Oral Language, the Spanish-only subjects scored significantly lower than the English monolingual and English-dominant bilingual subjects, $t(43) = 4.74$ and $t(28) = 4.27$, respectively, $p < .001$. Significant differences between the Spanish-only group and the other three groups were found in the Reading cluster, with all three groups scoring significantly higher than the Spanish-only subjects. In Reading Aptitude, on the other hand, no significant differences were found between the groups; all t-test values were non-significant at alpha = .05.

Discussion

Performance on the Woodcock-Johnson is best in the language in which the bilingual child is dominant. Specifically, the performance of the bilingual children is similar to that of their monolingual comparison group if the language of testing represents their dominant language. In identifying language dominance patterns, however, the

results support the notion that verbal fluency or communicative competence is an essential element of language proficiency (Barona, 1986; Garcia & Gonzalez, 1984) and must be considered, in addition to semantic functioning, in formal assessments. That is, verbal fluency must be assessed because a child's skill in the weaker language may be seen as not functional in a formal environment such as a classroom, but be adequate for social interactions in everyday activities (Cummins, 1981; McLaughlin, 1982). Consequently, recognition of these different aspects of language is important in understanding the discrepancy found between the groups in reading fluency.

Communicative Competence

Reading aptitude measures an aspect of the ability to understand and use language by assessing verbal processing skills. Well-developed verbal processing skills may also be thought of as defining verbal fluency or linguistic and communicative competence (Barona, 1986). Verbal fluency refers to the ability to engage in meaningful communicative interactions by using linguistic means regardless of grammatical or sociolinguistic appropriateness (Swain & Canale, 1981). The emphasis here is not on accuracy or correctness, but on acquiring a sense of how language is used to get things done and in comprehending how others use language to get things done (Shuy, 1986). It follows, then, that the verbal fluency skills tapped by the Reading Aptitude cluster are driven by communicative needs and intentions. Thus, the need to communicate with others (i.e., requesting information, reporting, evaluating, complaining, etc.) in their less proficient language, Spanish, would help English-dominant subjects not show deficits in Spanish Reading Aptitude relative to Spanish-dominant and Spanish-only subjects, as well as prompt the acquisition of English in Spanish-only subjects. And, because verbal fluency precedes reading fluency (McLaughlin, 1982) in children of this age, these skills, in turn, would help these subjects learn the purpose of written text and how others use written text to express meaning.

In the case of Spanish-only and English-dominant bilingual subjects, the fact that group differences in Spanish Reading Aptitude were nonexistent despite group differences in Oral Language suggests

that verbal fluency or linguistic and communicative competence is separate from the semantic aspects of expressive and receptive language skills. English-dominant subjects, therefore, possess a lower proficiency in the semantic development of Spanish, but at the same time, possess communicative competence in Spanish similar to that of Spanish-only and Spanish-dominant subjects. In addition, as we have seen, Spanish-only subjects possess limited communicative competence in English following one year of schooling.

The description of communicative competence or verbal fluency in English of Spanish-dominant subjects is less clear because a significant difference between Spanish-dominant and English-dominant subjects was found, but not between Spanish-dominant and English-only subjects, in both the prescore and postscore of Reading Aptitude. However, the lack of a significant difference between the scores of English-only and English-dominant subjects and the similarity of their Reading Aptitude postscores (464.1 and 464.7, respectively) suggest that, while a statistical difference between Spanish-dominant and English-only subjects was not found, a true difference between these two groups did exist in the English Reading Aptitude postscore (453.7 and 464.1, respectively). If this is the case, then, the Spanish-dominant subjects may experience difficulties in understanding and using the English language and may have less proficiency in this communicative aspect of language relative to English-dominant and English-only subjects.

Reading Ability

Whereas the Reading Aptitude cluster measured verbal fluency, the Reading cluster measured reading fluency skills (i.e., word recognition skills) which are necessary to abstract meaning from written text. Group differences in the Reading cluster corresponded to differences in the Oral Language cluster and bilinguals obtained lower scores in Reading when tested in their weaker language. For example, English-dominant subjects obtained lower scores than Spanish-dominant and Spanish-only subjects when these groups were tested in Spanish. Yet, unlike the observed differences in the Reading prescore where the English-dominant subjects obtained lower scores than the other two

groups, in the Reading postscore, differences were found only between English-dominant and Spanish-dominant subjects and not between English-dominant and Spanish-only subjects. However, as in the situation described above involving the Reading Aptitude postscores, the homogeneity of scores between the Spanish-dominant and Spanish-only subjects, specifically, the similarity of their Reading postscores (429.6 and 428.2, respectively), suggests that the scores of English-dominant and Spanish-only subjects in the Spanish Reading posttest (421.4 and 428.2, respectively) represent a true difference.

In the case of Spanish-dominant subjects, when tested in English, group differences did not exist in the Reading prescore; but, in the postscore, Spanish-dominant subjects scored significantly lower than both English-dominant and English-only subjects. Therefore, differences between Spanish-dominant subjects and the English-dominant and English-only subjects in English reading seem to stabilize and become prevalent at the beginning of first grade while differences between the English-dominant subjects and the Spanish-dominant and Spanish-only subjects in Spanish reading show up in kindergarten and continue into first grade. In any case, these findings suggest that at the beginning of first grade, bilingual children fall behind in basic reading ability when tested in their weaker language. The critical question becomes what causes the discrepancy in reading fluency between the groups, especially in the acquisition of reading in English. One explanation suggests that there is a linguistic basis for the differences in the reading skills being measured. Specifically, the findings hint at the possibility that differences in vocabulary growth and semantic functioning affect skilled early reading in bilinguals and second language learners. "Reading scholars recognize that word meanings are subtle and complex, and in many cases considerable experience is necessary for a child to elaborate the meaning of a word" (Hall et al., 1986, p. 96). In addition, the findings suggest that this language ability influences reading acquisition independent of cognitive ability and home environment--relevant differences in the background variables (Raven's matrices, parents' education, and the Home Literacy Scale) were not found. Thus, these children were likely to be prepared for

literacy in much the same way (i.e., similar exposure and awareness of print at home) and they came to the classroom with equivalent cognitive ability.

Therefore, the second explanation of why group differences in English reading exists concerns the role of classroom instruction. Spanish-only and Spanish-dominant subjects received no formal instruction which promoted reading ability in English. The next step, then, is to clarify which classroom strategies will lead to greater language skills and, in turn, promote reading ability in bilinguals and second language learners. The present findings suggest that outcomes of classroom experiences aimed at increasing reading fluency in English will be mediated by variation in the instructional attention given to vocabulary growth and semantic functioning. Instruction which emphasizes semantic skills will influence the extent to which children become familiar with individual words. For example, "most of the words encountered in basal reading selections are common and familiar. However, some unfamiliar words are included to give children practice in figuring out the meaning of words from context. Such variation in word knowledge affects the processing of individual words" (Omanson, 1985, p. 35) which, in turn, influences word recognition. For this reason, tests of vocabulary or word knowledge have been predictive of word recognition skills (Snow, 1987).

"Effective word recognition is held to be a setting condition for the successful operation of integrative cognitive processes by which information is obtained from the printed page and comprehended, remembered, and used to answer questions, draw influences, solve problems, and carry out other acts of thought. Thus, these integrative processes include perceptial mechanisms as well as the knowledge and skills for handling types of information, syntactic constructions, rhetorical devices, and discourse organizing techniques that are found much more often in written language than in spoken language. Therefore, if word recognition is not mastered, little progress toward skilled reading is likely to be made" (Carr, 1985, p. 1-2). It follows that training in semantic skills should facilitate learning to read in English. Experimental data on the vocabulary-reading relationship in

monolinguals supports this conclusion because vocabulary instruction has been shown to improve reading ability (Beck, Perfetti, & McKeown, 1982) and studies manipulating word familiarity have shown that vocabulary difficulty does influence reading ability directly (Freebody & Anderson, 1983; Wittrock, Marks & Doctorow, 1975).

Summary/Future Research

Communicative competence as measured by the Reading Aptitude cluster, as well as semantic functioning, as measured by the Oral Language cluster, represent two essential but different areas of language development. Furthermore, proficiency levels may vary within the same individual because how one understands the meaning of a spoken utterance is not necessarily the same as its semantic meaning (Austin, 1962; Grice, 1975). Thus, communicative competence and semantic functioning may follow two distinct developmental paths.

For this reason, research in language proficiency must adopt a developmental basis for the acquisition of both communicative competence and appropriate semantic functioning. Both of these language areas must be seen as continuously emerging while, at the same time, following different paths of development. For example, group differences in the semantic aspect of language did not necessarily produce group differences in communicative competence. In addition, movement towards communicative competence may occur earlier than appropriate semantic functioning because the former is intimately tied to social aspects of everyday activities, thereby, more likely to be self-initiated than the latter which demands greater instructional attention. Thus, how bilingual children and second language learners come to understand language and use it to shape their general linguistic experience despite limitations in other areas requires further investigation. Subsequently, knowledge of language use and the influence of prior language experience on classroom-dependent language and reading skills must be expanded.

How children become good or poor readers in English, then, must be examined by discovering how language proficiency influences reading performance. This research position agrees with that of Shuy (1968, 1986) which suggests that the future of reading research will need to

be at the level of word meaning and function (communicative competence). Shuy's model of how different areas of language influence reading is also useful as a starting point for further investigation. The model suggests that the different areas of language "are not discrete but operate simultaneously, in different relations to each other at various points in development. The reader varies the intensity of his focus on each area at various stages, but uses all of them at all times" (Shuy, 1986, p. 86). In this way, a developmental approach to understanding the relationship between language skills and reading ability should provide new information about literacy in bilinguals and second language learners.

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